

1                   **THE EMBODIMENTS OF THE INVENTION IN WHICH AN**  
2 **EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS**  
3 **FOLLOWS:**  
4

5                   1.     Apparatus for printing indicia on an external surface of  
6 cylindrical ammunition having an axis comprising:

7                         a plurality of inkjet print heads for spraying preprogrammed indicia  
8 on the ammunition;

9                         a conveyor for carrying a plurality of cylindrical ammunition thereon  
10 and for rotating the cylindrical ammunition about the ammunitions axis while  
11 traversing the plurality of inkjet print heads for printing the preprogrammed indicia  
12 thereabout; and

13                         a controller for causing the pre-programmed indicia to be sprayed  
14 on the ammunition as the ammunition is rotated.  
15

16                   2.     The apparatus as described in claim 1 wherein the inkjet  
17 print heads spray UV curable ink and further comprises:

18                         a UV source for curing the UV-curable ink,  
19                         wherein the UV source is positioned in a housing through which the  
20 printed ammunition are conveyed by the conveyor.  
21

22                   3.     The apparatus as described in claim 1 wherein the  
23 preprogrammed indicia is a camouflage pattern.  
24

1           4.     The apparatus as described in claim 1 wherein the  
2 controller is a computer.

3

4           5.     The apparatus as described in claim 1 wherein the  
5 ammunition is a shotshell further comprising a case and a hull attached thereto.

6

7           6.     The apparatus as described in claim 5 further comprising:  
8                 a plurality of spindles projecting from the conveyor for insertion into  
9 and engagement of an open end of a shotshell case for rotatable conveyance  
10 thereof; and

11                means for orienting the shotshell to present the open end of the  
12 case to the spindle for engagement thereon.

13

14           7.     The apparatus as described in claim 6 wherein the spindles  
15 are carried rotatably on the conveyor for rotating the shotshells thereon.

16

17           8.     The apparatus as described in claim 6 further comprising at  
18 least one drive belt, driven in an opposite direction to a direction of the conveyor,  
19 and operable to engage the rotatable spindles causing rotation thereof.

20

21           9.     The apparatus as described in claim 8 further comprising a  
22 idler belt positioned on an opposing side of the conveyor to the drive belt to aid in  
23 engagement of the drive belt with the spindles positioned therebetween.

1                    10.    The apparatus as described in claim 6 further comprising a  
2 rack and wherein the spindles further comprise pinions for engaging the rack and  
3 rotating the spindles therebetween.

4  
5                    11.    The apparatus as described in claim 6 wherein a distal end  
6 of each of the plurality of spindles further comprises a magnet for engaging a  
7 metal hull and attached case thereon.

8  
9                    12.    The apparatus as described in claim 1 wherein the plurality  
10 of inkjet printer heads further comprises:

11                    at least one printer head for printing yellow;  
12                    at least one printer head for printing cyan; and  
13                    at least one printer head for printing magenta.

14  
15                    13.    A method of applying indicia about an external surface of  
16 cylindrical ammunition comprising:

17                    providing a plurality of ammunition;  
18                    orienting the ammunition for application of the indicia thereon; and  
19                    applying the indicia to a substantial portion of an entire outer  
20 surface of the ammunition.

21

1                   14.    The method as described in claim 13 further comprising  
2 rotating the ammunition about an axis while applying the indicia.

3

4                   15.    The method as described in claim 14 further comprising  
5 controlling one or more ink jet print heads for applying a preprogrammed indicia  
6 to the substantial portion of the entire outer surface of the ammunition.

7

8                   16.    The method as described in claim 14 further comprising  
9 controlling one or more ink jet print heads for applying a preprogrammed indicia  
10 to the substantial portion of the entire outer surface of the ammunition,  
11 wherein the preprogrammed indicia is a camouflage pattern.

12

13                   17.    The method as described in claim 13 further comprising:  
14 pre-treating the substantial portion of the entire outer surface of the  
15 ammunition using a corona treatment; and  
16 controlling one or more ink jet print heads for applying a  
17 preprogrammed indicia to the substantial portion of the entire outer surface of the  
18 ammunition using a solvent-based ink.

19

1           18. The method as described in claim 13 wherein the  
2 ammunition is a shotshell, each shotshell having a case and attached hull, the  
3 method further comprising:

4           orienting the shotshells so as to present an open end of the case to  
5 a conveyor spindle;

6           engaging the open end of the case with the conveyor spindle;

7           actuating the conveyor to cause the engaged shotshells to be  
8 rotatably passed adjacent a plurality of inkjet print heads;

9           actuating the inkjet print heads to spray ink for imparting the indicia  
10 about substantially the entire external surface of each shotshell; and

11          removing the shotshells from the conveyor.

12

13          19. The method according to claim 18 wherein the inkjet ink is  
14 UV curable ink and following actuating the inkjet printer heads to impart the  
15 indicia, further comprising:

16          exposing the shotshells to a UV source for curing the ink sprayed  
17 thereon.

18

19          20. The method as described in claim 13 wherein the indicia  
20 printed on the ammunition is a camouflage pattern.

21

1                   21.    The method as described in claim 20 wherein the inkjet print  
2   heads are actuated by a controller, the controller being programmed with the  
3   camouflage pattern.

4  
5                   22.    The method as described in claim 13 further comprising:  
6                   applying the indicia to a heat transfer sleeve;  
7                   positioning the heat transfer sleeve over at least a portion of the  
8   external surface of the ammunition; and  
9                   applying sufficient heat to the heat transfer sleeve to cause the heat  
10   transfer sleeve to shrink and bond to the external surface of the ammunition.

11  
12                  23.    The method as described in claim 20 further comprising:  
13                  applying non-glare ink to a portion of the ammunition left uncovered  
14   by the heat transfer sleeve.

15  
16                  24.    The method as described in claim 20 wherein the indicia  
17   applied to the heat transfer sleeve is a camouflage pattern.

18  
19                  25.    A camouflaged ammunition comprising a substantially  
20   cylindrical outer surface,  
21                  wherein indicia is applied to substantially the entire outer surface.

1                   26.   The camouflaged ammunition as described in claim 25  
2 wherein the indicia comprises at least a camouflage pattern.

3

4                   27.   The camouflaged ammunition as described in claim 25  
5 wherein the indicia comprises:

6                   a camouflaged pattern covering a portion of the outer surface; and

7                   a non-glare ink covering a remaining portion of the outer surface.

8

9                   28.   The camouflaged ammunition as described in claim 25  
10 wherein the ammunition is a shotshell.